



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/666,115	09/19/2003	LeNoir E. Zaiser	2173.2004-001	8421
59242 7590 02/03/2009 R.D. JOHNSON & ASSOCIATES, P.C. 20 PICKERING STREET P.O. BOX 920353 NEEDHAM, MA 02492				
EXAMINER				
SCHNEIDER, CRAIG M				
ART UNIT		PAPER NUMBER		
3753				
MAIL DATE		DELIVERY MODE		
02/03/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/666,115

**Applicant(s)**

ZAISER ET AL.

**Examiner**

CRAIG M. SCHNEIDER

**Art Unit**

3753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 November 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 2, 4, 5, 7-22, and 24-30 is/are pending in the application.
- 4a) Of the above claim(s) 19-22 and 26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2, 4, 5, 7-18, 24, 25, and 27-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 November 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Final Drawing Review (PTO-849)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Election/Restrictions***

1. Applicant's election without traverse of Group I in the reply filed on 5/28/08 is acknowledged.
2. Claims 19-22 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 5/28/08.
3. Claims 24-26 and 30 were previously restricted on 3/21/06. The examiner is rejoining claims 24, 25, and 30 because the apparatus claims of claims 7, 12, and 27 are not distinguishable from the method claims.
4. The claims that will be examined in the office action are 2, 4, 5, 7-18, 24, 25, and 27-30.

***Drawings***

5. The drawings were received on 11/24/08. These drawings are acceptable.

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims 2 and 10 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed,

had possession of the claimed invention. The at least 17% of the surface area does not have support in the originally filed application. The originally filed application states "about 17%".

***Claim Rejections - 35 USC § 102***

8. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

9. Claims 2, 7, 10-13, 17, 18, 24, 25, and 27-30 are rejected as understood under 35 U.S.C. 102(b) as being anticipated by Chaney (3,285,261).

Chaney discloses a pneumatic differential pressure valve to supply a quantity of a medium in response to an inhalation breath comprising a nozzle (27) in communication with a pressurized supply (25) of a medium and having a head (26) for delivering the pressurized supply of the medium to a delivery outlet(5); a control chamber (20') capable of being pressurized and then depressurized in response to an inhalation breath; and a diaphragm (19) disposed between the nozzle head and the delivery outlet and controlled by pressure in the control chamber, wherein the diaphragm pneumatically seals the nozzle head when the control chamber is pressurized and pneumatically releases from the nozzle head in response to a reduction in pressure in the control chamber, and wherein the surface area of the nozzle head in contact with the diaphragm is computed so that the diaphragm pneumatically releases from the nozzle head in response to the inhalation breath without mechanical assistance col. 2, line 3 to col. 3, line 62).

Regarding claims 2 and 10, the surface area of the nozzle head is at least 17% of the surface area of the diaphragm in contact with the control chamber as can be seen in Figure 2.

Regarding claim 11, the control chamber of Chaney is capable of being pressurized to at least about 22 psi.

Regarding claim 12, the gas reservoir for the supply gas is attached to the threaded section 25. The timing gas chamber is the control chamber (20').

Regarding claim 27, the pilot valve (35) operates in response to an inhalation breath.

Regarding claims 24, 25, and 30; the method claims are anticipated by the apparatus of Chaney.

Regarding claims 17, 18, 28, and 29; per Figure 2 in Chaney the ratio of the opposing pneumatic forces would be less than 1:2.4 and further would be less than 1:2.

***Claim Rejections - 35 USC § 103***

10. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

11. Claims 4, 8, 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chaney in view of Holben et al. (4,363,424).

Chaney discloses a filter (17) located in the oxygen channel that leads to the nozzle/diaphragm interface as can be seen in Figure 2. Chaney fails to disclose that the filter is located at the interface of the nozzle and diaphragm. Holben et al. disclose

a filter (162) located in a nozzle section (152) that interfaces with the valve structure (98)(col. 9, line 37 to col. 10, line 10).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to change the location of the filter as disclosed by Chaney to be at an interface of the nozzle and the valve as disclosed by Holben et al., since the changing of the location of the filter would not alter the function of the device.

12. Claims 5, 9, 15, 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chaney in view of Holben et al. as applied to claim 4 above, and further in view of Danon (5,348,001).

Chaney in combination with Holben et al. disclose all the features of the invention except that the filter has a porosity of 20 micrometers and is made of sintered bronze. Danon disclose utilizing a filter (12) that has a porosity of 20 microns (col. 5, lines 9-11) and is made of sintered bronze (col. 4, line 66 to col. 5, line 4).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize a 20 micron filter as disclosed by Danon in place of the filter of the combined device of Chaney and Holben et al., in order to filter the air to 20 microns.

Regarding claim 16, it would have been obvious to one of ordinary skill in the art to utilize sintered bronze material as disclosed by Danon with the filter of the combined device of Chaney and Holben et al., in order to utilize a commonly available filter material.

***Response to Arguments***

13. Applicant's arguments with respect to the art on the pending claims have been considered but are moot in view of the new ground(s) of rejection.
14. Applicant's arguments filed 11/24/08 have been fully considered but they are not persuasive in regards to the 112/1<sup>st</sup> rejection.
15. The applicant is arguing that they have support in the specification for the "about 17%" claim limitation and therefore the 112/1<sup>st</sup> rejection should be dropped. The examiner agrees with this but the claim states "at least 17%" not "about 17%" therefore the applicant does not have support for the "at least 17%" claim limitation.

***Conclusion***

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Dockery (3,638,675) and Shamlan et al. (4,219,017) disclose nozzles that have filters in the flow path.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CRAIG M. SCHNEIDER whose telephone number is (571)272-3607. The examiner can normally be reached on M-F 8:00 -4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Greg Huson can be reached on (571) 272-4887. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/C. M. S./  
Examiner, Art Unit 3753  
January 30, 2009

/John Rivell/  
Primary Examiner, Art Unit 3753